## ABSTRACT

A computer graphics system provides for processing image data including Z data for use in displaying three-dimensional images on a display unit. The system includes: a depth buffer providing for temporary storage of Z data; and a graphics processing unit having a graphics

5    engine for generating image data including Z data, and a memory interface unit communicatively coupled to the graphics engine and communicatively coupled to the depth buffer via a depth buffer interface. The graphics processing unit is operative to compress at least a portion of the generated Z data, to write the compressed portion of Z data to the depth buffer via the depth buffer interface in a compressed format, to read portions of compressed Z data from the depth

10   buffer via the depth buffer interface, and to decompress the compressed Z data read from the buffer. An advantage of the present invention is that effective Z data bandwidth through the depth buffer interface is maximized in order to facilitate fast depth buffer access operations.